

(b) Packaged blasting agents shall be stored in a magazine or other facility which is ventilated to prevent dampness and excessive heating, weather-resistant, and locked or attended. Drop trailers do not have to be ventilated if they are currently licensed by the Federal, State, or local authorities for over-the-road use. Facilities other than magazines used to store blasting agents shall contain only blasting agents.

(c) Bulk blasting agents shall be stored in weather-resistant bins or tanks which are locked, attended, or otherwise inaccessible to unauthorized entry.

(d) Facilities, bins or tanks shall be posted with the appropriate United States Department of Transportation placards or other appropriate warning signs that indicate the contents and are visible from each approach.

**§57.6131 Location of explosive material storage facilities.**

(a) Storage facilities for any explosive material shall be—

(1) Located so that the forces generated by a storage facility explosion will not create a hazard to occupants in mine buildings and will not damage dams or electric substations; and

(2) Detached structures located outside the blast area and a sufficient distance from powerlines so that the powerlines, if damaged, would not contact the magazines.

(b) Operators should also be aware of regulations affecting storage facilities in 27 CFR part 55, in particular, 27 CFR 55.218 and 55.220. This document is available at any MSHA Metal and Nonmetal Safety and Health district office.

**§57.6132 Magazine requirements.**

(a) Magazines shall be—

(1) Structurally sound;

(2) Noncombustible or the exterior covered with fire-resistant material;

(3) Bullet resistant;

(4) Made of nonsparking material on the inside;

(5) Ventilated to control dampness and excessive heating within the magazine;

(6) Posted with the appropriate United States Department of Transportation

placards or other appropriate warning signs that indicate the contents and are visible from each approach, so located that a bullet passing through any of the signs will not strike the magazine;

(7) Kept clean and dry inside;

(8) Unlighted or lighted by devices that are specifically designed for use in magazines and which do not create a fire or explosion hazard;

(9) Unheated or heated only with devices that do not create a fire or explosion hazard;

(10) Locked when unattended; and

(11) Used exclusively for the storage of explosive material except for essential nonsparking equipment used for the operation of the magazine.

(b) Metal magazines shall be equipped with electrical bonding connections between all conductive portions so the entire structure is at the same electrical potential. Suitable electrical bonding methods include welding, riveting, or the use of securely tightened bolts where individual metal portions are joined. Conductive portions of nonmetal magazines shall be grounded.

(c) Electrical switches and outlets shall be located on the outside of the magazine.

**§57.6133 Powder chests.**

(a) Powder chests (day boxes) shall be—

(1) Structurally sound, weather-resistant, equipped with a lid or cover, and with only nonsparking material on the inside;

(2) Posted with the appropriate United States Department of Transportation placards or other appropriate warning signs that indicate the contents and are visible from each approach;

(3) Located out of the blast area once loading has been completed;

(4) Locked or attended when containing explosive material; and

(5) Emptied at the end of each shift with the contents returned to a magazine or other storage facility, or attended.

(b) Detonators shall be kept in chests separate from explosives or blasting agents, unless separated by 4-inches of hardwood or equivalent, or a laminated

partition. When a laminated partition is used, operators must follow the provisions of the Institute of Makers of Explosives (IME) Safety Library Publication No. 22, (May 1993), "Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials," (May 1993), and the "Generic Loading Guide for the IME-22 Container," (October 1993). This incorporation by reference has been approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203, and at all Metal and Nonmetal Mine Safety and Health district offices, or available for inspection at the Office of the Federal Register, 800 North Capitol Street NW., 7th Floor, suite 700, Washington, DC.

STORAGE—UNDERGROUND ONLY

**§ 57.6160 Main facilities.**

(a) Main facilities used to store explosive material underground shall be located—

- (1) In stable or supported ground;
- (2) So that a fire or explosion in the storage facilities will not prevent escape from the mine, or cause detonation of the contents of another storage facility;
- (3) Out of the line of blasts, and protected from vehicular traffic, except that accessing the facility;
- (4) At least 200 feet from work places or shafts;
- (5) At least 50 feet from electric substations;
- (6) A safe distance from trolley wires; and
- (7) At least 25 feet from detonator storage facilities.

(b) Main facilities used to store explosive material underground shall be—

- (1) Posted with warning signs that indicate the contents and are visible from any approach;
- (2) Used exclusively for the storage of explosive material and necessary equipment associated with explosive material storage and delivery;
- (i) Portions of the facility used for the storage of explosives shall only

contain nonsparking material or equipment.

(ii) The blasting agent portion of the facility may be used for the storage of other necessary equipment;

(3) Kept clean, suitably dry, and orderly;

(4) Provided with unobstructed ventilation openings;

(5) Kept securely locked unless all access to the mine is either locked or attended; and

(6) Unlighted or lighted only with devices that do not create a fire or explosion hazard and which are specifically designed for use in magazines.

(c) Electrical switches and outlets shall be located outside the facility.

**§ 57.6161 Auxiliary facilities.**

(a) Auxiliary facilities used to store explosive material near work places shall be wooden, box-type containers equipped with covers or doors, or facilities constructed or mined-out to provide equivalent impact resistance and confinement.

(b) The auxiliary facilities shall be—

- (1) Constructed of nonsparking material on the inside when used for the storage of explosives;
- (2) Kept clean, suitably dry, and orderly;
- (3) Kept in repair;
- (4) Located out of the line of blasts so they will not be subjected to damaging shock or flyrock;
- (5) Identified with warning signs or coded to indicate the contents with markings visible from any approach;
- (6) Located at least 15 feet from all haulageways and electrical equipment, or placed entirely within a mined-out recess in the rib used exclusively for explosive material;
- (7) Filled with no more than a one-week supply of explosive material;
- (8) Separated by at least 25 feet from other facilities used to store detonators; and
- (9) Kept securely locked unless all access to the mine is either locked or attended.